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## <sup>3</sup> Facts about the Weigh-a-Day- a-Month Plan

<sup>3a</sup> The new plan in the  
National Cooperative  
Dairy Herd Improvement  
Program <sup>[3b] below</sup>



<sup>3b</sup> [By]

Agricultural Research Service and  
Federal Extension Service

U.S. DEPARTMENT OF AGRICULTURE

<sup>5c</sup>  
August 1956

# Steps Required in Each of the Three Plans in the National Cooperative Dairy Herd Improvement Program

Weigh-a-Day-a-Month	Owner-Sampler	Standard DHIA
Owner weighs milk	Owner weighs milk	Supervisor weighs milk
Owner weighs feed	Owner weighs feed	Supervisor weighs feed
Owner enters figures	Owner enters figures	Supervisor enters figures
Owner mails forms	Supervisor picks up forms	Supervisor handles forms
	Owner takes milk samples	Supervisor takes milk samples
	Supervisor or central laboratory tests milk for butterfat	Supervisor or central laboratory tests milk for butterfat
	Central office calculates unofficial records	Supervisor or central office calculates unofficial records
Supervisor eartags animals		
Breeding record is compiled		
Production records used in proved-sire program		
Owner uses records to improve his herd	Owner uses records to improve his herd	Supervisor assists owner to use records to improve his herd
Cost: About 5¢ per cow per month	Cost: About 25¢ per cow per month	Cost: About 40¢ per cow per month

8. The Dairy Husbandry Research Branch, Agricultural Research Service, and the Federal Extension Service have cooperated in preparation of this report.

## FACTS ABOUT

# The Weigh-a-Day-a-Month Plan

THE Weigh-a-Day-a-Month Plan is a low-cost milk-recording service that provides a new opportunity for dairy farmers to participate in a record-keeping system, in order to improve their efficiency of production and to increase their income.

The new plan supplements, stimulates, and complements the existing Owner-Sampler Plan (page 4) and the Standard Dairy Herd Improvement Association Plan (page 6), and is expected to greatly extend the services of the National Cooperative Dairy Herd Improvement Program, of which all three plans are a part. In the next 10 years it is believed that expanded services in the three plans will bring 12 million cows--half of those in the country--into the movement for organized record-keeping.

Need for the new program is indicated by these background facts:

1. Nine out of 10 farmers selling milk in the United States keep no production records of their herds or of individual cows.
2. Fifty years of experience with the Dairy Herd Improvement Association Plan shows that there is no substitute for production records in managing and improving a dairy herd.
3. Milk is produced more cheaply and efficiently by high-producing than by low-producing cows. Information from DHIA records for 1953-54 shows the relationship between level of production and feed costs:

Average milk yield per cow per year	Feed cost per cow	Feed cost per 100 lbs. milk
<u>Pounds</u>	<u>Dollars</u>	<u>Dollars</u>
4,000	\$ 126	\$ 3.15
6,000	149	2.48
8,000	173	2.16
10,000	189	1.89
12,000	205	1.70
14,000	226	1.61

For effective herd management, farmers need to know how much milk each cow produces and how much feed she consumes each month of the year. This is as true for those who own grade dairy herds as it is for those who breed registered animals. Armed with this information they can

- (1) Cull out low-producing and unprofitable cows,
- (2) Feed each cow according to her ability to produce, and
- (3) Select the best animals to breed for replacements.

Good results are anticipated from the Weigh-a-Day-a-Month Plan in spite of the fact that dairymen--like everybody else--are reluctant to keep records. However, when it can be demonstrated that a minimum amount of record-keeping can result in greater efficiency, lower costs, and higher profits, it is believed that many more dairymen will weigh their milk and feed one day a month for each of their cows, put down the weights on a form, and mail it. They will be relieved of the job of calculating the records, which will be done for them by a computing service at a nominal cost. Computed records on each cow and on the herd will be mailed back to them each month, with a reminder to weigh again on the 15th.

Long experience in the Standard DHIA Plan has shown, thousands of times, that nothing can take the place of production records. Over and over again, dairymen have found that what they thought were their best cows were not at all the best and may have been the poorest, when put on record. A heavy producer early in a lactation may later drop to a very low daily figure, while an unspectacular but steady producer may add up a remarkably good record at the end of a year. Feed records show which animals are being underfed and which are being fed too much, based on their actual production. Milk and feed records taken together may demonstrate that a dairyman is milking, feeding, and doing the work for two or three poor cows that make less money than one good one. Records point out unmistakably the animals that should be culled and those that should be selected for raising herd replacements.

Someone is certain to question whether a record taken only one day a month is sufficiently accurate to indicate actual production. This matter has been tested under the older plans and it has been found that a day-a-month recording comes within about 2 percent of actual milk production, based on records taken every day. The time and expense of making daily records is not justified when the margin of error is so small, and when the accuracy is such that it serves the purpose equally well. Both the Standard DHIA Plan and the Owner-Sampler Plan use one-day-a-month recording.

Some may question the practice of making records on the basis of milk production alone. It is much less expensive to get the milk yield of a cow month-by-month and for the lactation period than to include butter-fat yields. Information on the yield of milk alone provides adequate information to enable dairymen to spot accurately the low-producing, unprofitable cows in their herds. Such records also enable them to feed their cows according to production, thus making more efficient use of the feed supply. Many dairymen who get their introduction to record-keeping through the Weigh-a-Day-a-Month Plan will find it so useful that they will soon want a more complete method of record-keeping, such as the Standard DHIA Plan.

A dairy farmer has little or no individual control over the price he gets for his milk. But he can help himself by whittling the other end of the stick--to lower his costs and get a larger net return. Record-keeping is a ready method of lowering costs. And record-keeping can hardly be made more painless than by the Weigh-a-Day Plan, with all the calculating done by someone else at about a nickel a cow per month.

The Weigh-a-Day-a-Month Plan has been approved by the American Dairy Science Association and the Extension Committee on Organization and Policy. It is a joint undertaking of the Cooperative Agricultural Extension Service and the Dairy Husbandry Research Branch, Agricultural

Research Service, U. S. Department of Agriculture. This plan, together with the Standard DHIA Plan and the Owner-Sampler Plan, constitute the National Cooperative Dairy Herd Improvement Program.

Weigh-a-Day is somewhat similar to a plan tried out under field conditions in Illinois during the past 2 years. It is expected to appeal especially to the 91 percent of farmers who sell milk and have small herds of 14 cows or less. These farmers milk about 60 percent of the Nation's dairy cows and provide about 40 percent of the milk that is sold. However, the Plan may be equally suitable to dairymen with larger herds.

## HOW THE WEIGH-A-DAY-A-MONTH PLAN OPERATES

### What a Dairy Farmer Does

The Weigh-a-Day-a-Month Plan is the essence of simplicity, requiring as little time and effort of a dairyman as is consistent with helpful record-keeping. The following steps outline the program:

1. Dairyman enrolls in Weigh-a-Day-a-Month Plan and gets instructions from his County Agricultural Agent.
2. He pays in advance a year's fee for record-keeping on his herd. (Approximate cost is 5 cents per cow per month, but costs may vary from place to place.)
3. He provides an accurate dairy scale and a record book cover.
4. He weighs the milk of each cow, morning and night, on the 15th of each month and enters the figures on a form supplied him. He includes for each cow the dates of freshening, going dry, bought, sold, and died, and may include herd feed records. (No butterfat samples are taken; average butterfat production of the herd is obtained from the monthly milk check.)
5. He mails the form to the local County Agent's office or a designated computing service, where the records are calculated.
6. He receives the calculated records from the computing service each month and uses them as a guide in feeding, culling, and breeding cows in his herds.

Because the milk is not weighed by a disinterested person--such as the supervisor in the Standard DHIA Plan--the records are unofficial. They are not used for proving sires, and they have limited value in selling surplus stock. But they have great value to the individual dairyman, as a guide to better feeding, culling, and breeding.

### What Others Do

County Agricultural Agents are responsible for introducing, organizing, and supervising the Weigh-a-Day-a-Month Plan in their respective counties. They make the Plan known to farmers and small dairymen through meetings, direct mail, and all available local information outlets--

newspapers, radio, television. They work with existing dairy committees, milk cooperatives, farm organizations, artificial breeding associations, dairy leaders, vocational agriculture groups, and other allied or interested organizations to inaugurate the Plan and enroll dairymen in it. They establish computing services to calculate the records, or obtain the services of those already in existence. They supervise or assist in supervising the processing of monthly and annual records and reports. Some of them may prepare monthly letters, touching on timely dairy topics, to be sent with report forms to farmers. By means of direct mail, information outlets, meetings, and personal visits, they assist farmers in making use of the records to improve their herds through better feeding, breeding, and management.

The Agricultural Extension Service, through the office of the State Extension Dairyman, supervises the Weigh-a-Day-a-Month Plan in the State and distributes all forms, which are used only under the supervision of County Agricultural Agents. It supplies information, assists in organizing, developing, and conducting the program, and assists in summarizing State information derived from the operation of the program.

The Dairy Husbandry Research Branch, Agricultural Research Service, USDA, supplies forms and educational materials to State Agricultural Extension Service offices. The Dairy Husbandry Research Branch also makes national summaries from the data supplied by the States, and distributes this information.

## **The Owner-Sampler Plan**

The Owner-Sampler Plan was started in several States about 30 years ago in order to increase the number of dairy farmers participating in organized dairy record-keeping. This plan usually operates in conjunction with the Standard DHIA Plan. It differs from the Weigh-a-Day-a-Month Plan in that it includes butterfat testing of individual cows, and the DHIA supervisor provides some additional services for the dairyman.

As of January 1, 1956, this plan was being used in 38 States and the Territory of Alaska, and included 17,110 herds having a total of 374,479 cows. The average herd had 22 cows. The total represents a little more than 1.5 percent of all dairy cows in the country. Previously operated independently by the States, the Owner-Sampler Plan is being incorporated into the National Cooperative Dairy Herd Improvement Program.

### **HOW THE OWNER-SAMPLER PLAN OPERATES**

The Owner-Sampler Plan of record-keeping offers the dairy farmer the most economical means of getting milk and butterfat production records on his cows and herd.

#### What a Dairy Farmer Does

The following steps outline the Plan:

1. Dairyman enrolls in Owner-Sampler Plan, which is usually operated in conjunction with the Standard DHIA Plan.

2. He signs a membership agreement and makes arrangements for the payment of fees established to cover the cows' owner-sampler records. (Approximate cost is 25 cents per cow per month, but costs may vary in different areas.)
3. He gets instructions for weighing and sampling milk from the office of his County Agricultural Agent or the supervisor. He weighs and takes a sample of milk from each cow the evening of the day the supervisor brings to the farm the milk scales, sample jars, and other necessary equipment to get milk weights and samples. He repeats the procedure at the morning milking. He enters the milk weights from each milking for each cow on a form supplied him. He includes for each cow the dates of freshening, going dry, bought, sold, or died that affect the current month's record.
4. He determines the amount of feed given the herd on the test day and enters this data on the record form. He turns over to the supervisor the milk weights and feed records together with the properly marked milk sample jars containing the samples of milk from each cow in the herd.
5. When he receives the calculated records for his cows and herd, he can use them to improve his herd. Since the milk weights and samples were not taken by a disinterested person, the DHIA supervisor, the records are unofficial. They are not used in the National Proved Sire Program. The records, however, serve as a reliable guide for the dairyman to feed and cull his herd and to select cows from which to save calves for herd replacements.

#### What Others Do

The Association Supervisor, on the testing day established for the herd, brings to the dairy farm the milk scales, sample jars, and other equipment for weighing and sampling milk. He leaves with the farmer a record sheet upon which he is to enter the required data on the cows and the herd. He gives the dairyman complete instructions on weighing and sampling milk and on entering the data on the form. After testing day, he picks up the samples and recorded information, tests the samples for butterfat content, and calculates milk and butterfat production for each cow and for the herd. He eartags each cow in the herd, if this has not been done, thus establishing the identity of each animal. He sends the dairyman a copy of the calculated records for the month and assists him in using them to the best advantage.

County Agricultural Agents are responsible for introducing the Owner-Sampler Plan in their respective counties. They work with the local DHIA to provide facilities for the Owner-Sampler record-keeping plan to operate. They supervise the operation of the Plan and assist in supervising the processing of monthly and annual records and reports.

By means of direct mail, information outlets, meetings, and personal visits, they assist farmers in making use of the records to improve their dairy herds.

The Agricultural Extension Service, through the office of the State Extension Dairyman, supervises the Owner-Sampler Plan in the State and

distributes all forms, which are used only under the supervision of County Agricultural Agents. It supplies information, assists in organizing, developing, and conducting the program, and assists in summarizing State information derived from operation of the program.

The Dairy Husbandry Research Branch, Agricultural Research Service, USDA, supplies forms and educational material to State Agricultural Extension Service offices. The Dairy Husbandry Research Branch makes national summaries from figures supplied by the States and distributes this information.

## THE STANDARD DHIA PLAN

The Standard Dairy Herd Improvement Association Plan is the parent of Owner-Sampler and Weigh-a-Day plans.

The first cow-testing association was organized in Denmark in 1895. Danish-born Helmer Rabild imported the idea into Michigan and put it actively to work in 1906, the first year systematic dairy records were kept in the United States. He joined the Federal Government 2 years later, and, after passage of the Cooperative Federal Extension Act in 1914, the associations were drawn into a coordinated State and Federal record-keeping program. Starting with one association in 1906, containing 239 cows in 31 herds, the program had increased by 1956 to 2,266 associations, which had on test 1,406,306 cows in 40,984 herds. Associations now operate in every State and in Hawaii and Puerto Rico.

A typical dairy-herd-improvement association is a cooperative organization of dairy farmers, usually about 26, who employ a supervisor to keep feed, production, income, and breeding records on members' cows. He visits each herd once a month. For each cow, during two consecutive milkings, he weighs the feed consumed and the milk produced, and determines the butterfat content of the milk. The supervisor also eartags each cow, thus establishing her identity, compiles records for each month and year, and helps the owner to keep a record of the progeny of each cow.

A variant of this organization is the countywide association, in which the supervisor makes monthly visits, weighs feed and milk, and takes samples for butterfat testing. Actual testing and computation of records is done at a central point. Because weights and samples are taken by a disinterested person, the supervisor, these records are official.

Breeding records grew naturally, in 1935, into the National Proved Sire Program, for the bull is not merely, as the saying goes, "half the herd." A succession of herd sires soon becomes most of the herd: The first sire provides half of the parentage of first-generation daughters. The second sire, plus the first, provide 75 percent of the parentage of second-generation daughters. The third sire, plus the first two, provide 87.5 percent of the parentage of third-generation daughters. And so on. A proved-sire record is a tabulation that shows the average milk and butterfat production of five or more dam-and-daughter pairs and compares the average increase or decrease in production of the daughters.

The average milk production of cows on standard DHIA test has increased 56.6 percent--from 5,300 pounds a year in 1906 to 9,363 pounds

a year in 1954. Average butterfat production in the same period has increased 57.8 percent--from 215 to 372 pounds a year. The average dairy cow in the United States now produces 5,815 pounds of milk a year--only 61 percent of the DHIA average.

While this Plan has had a good growth, it still includes only about 6 percent of the approximately 24 million milk cows in the country. But it represents about 95 percent of the large herds (averaging 34 cows) in commercial dairies. And, because of the breeding program, it has created a pool of high-producing dairy seedstock that can be drawn upon by other producers. Good proved sires are scarce, but more than one-third of those being used in artificial insemination have demonstrated their worth through performance officially attested in DHIA records.

## HOW THE STANDARD DHIA PLAN OPERATES

The Standard Dairy Herd Improvement Association Plan provides the facilities for the dairyman to obtain the most complete records possible of his cows and herd.

### What a Dairy Farmer Does

1. Enrolls in the Standard DHIA Plan and joins the local Dairy Herd Improvement Association.
2. He signs a membership agreement and agrees to the rules of Standard DHIA record-keeping and to the schedule of fees to cover the cost of DHIA record keeping. (Approximate cost is 40 cents per cow per month, but cost may vary in different areas.)
3. He serves on committees or boards, when appointed or elected, to handle the business affairs of his association. The association employs a supervisor who visits each farm once each month to conduct production tests of the herd in full compliance with Standard DHIA rules.
4. He cooperates with the association supervisor to obtain complete and accurate information on the cows and the herd. He supplies the supervisor with complete identification information on each cow in the herd. He furnishes the supervisor with a record of all dates, such as those when cows were bought, freshened, went dry, were sold, or died, affecting the current monthly record of each cow.
5. He assists the supervisor in obtaining accurate feed records on the herd.
6. He follows a milking routine on the test day to enable the supervisor to observe each cow being milked, and personally weigh and sample the milk and record the weights on standard record-keeping forms.
7. He receives complete standard DHIA production and feed records on his cows and herd.

Because all standard DHIA records are obtained by the association supervisor--a disinterested person--the records are authenticated and

used in the National Proved Sire Program. They are readily accepted in advertising, sale of surplus stock, and other activities.

Complete production and feed records enable the dairyman to take full advantage of all opportunities to improve the producing efficiency of his herd by effective culling, intelligent feeding, and the selection of brood cows in his herd to mate to superior DHIA proved sires.

### What Others Do

The Association Supervisor visits each association member farm once each month (or once every other month) and weighs and samples the milk of each cow in the herd. He obtains feed records for the herd. He, or a central testing laboratory, tests the samples, calculates complete standard DHIA records for the cows and the herd, and assists the dairyman in many ways.

County Agricultural Agents are responsible for introducing, organizing, and supervising the Standard DHIA Plan in their respective counties. They make the program known to farmers through meetings, direct mail, and all available local information outlets--newspapers, radio, and television. They supervise the operation of the Plan and direct the processing of monthly and annual reports.

They prepare monthly letters on timely dairy topics to be sent to DHIA members. By means of direct mail, information outlets, meetings and periodical visits they assist DHIA members, and, on the basis of local DHIA records and results, assist DHIA dairymen in their counties to improve the producing efficiency of their dairy herds through improved practices in culling, feeding, and breeding.

Agricultural Extension Service, through the offices of the State Extension Dairymen, supervises and directs the Standard DHIA Plan and distributes all DHIA record-keeping forms, which are used only under the supervision of the County Agricultural Agent. It supplies information, assists in organizing, developing, and conducting the program, and assists in summarizing State information derived from the operation of the program.

The Dairy Husbandry Research Branch, Agricultural Research Service, USDA, supplies forms and educational material to State Agricultural Extension Service offices. The Dairy Husbandry Research Branch makes national summaries from data supplied by the States and distributes the information.







